petition, AT&T should be unable to engage in monopoly pricing in any market."[20]

The Commission very frequently makes reference to its preference for allowing competition to regulate the marketplace rather than relying upon government regulation.[21] Long-distance clearly constitutes a marketplace in which the Commission could place primary reliance upon competition to regulate. In economic terms, the long-distance industry is structured competitively, with open entry conditions and ample productive capacity effectively distributed among many different suppliers, including resellers. Not surprisingly, therefore, it performs competitively, offering consumers a variety of reasonably priced service options, frequent improvements in service and calling features, as well as informative advertising and comparative pricing services. The industry is technically progressive and widely regarded as an important strategic asset of the United States in global competition. The evolution of a competitive long-distance market has been one of the great success stories in the history of antitrust and communications regulation.

To evaluate AT&T's competitive performance in specific quantitative terms, we have examined price and output data from 1991 to 1994. Our analysis indicates that AT&T's prices, net of access, have declined in nominal terms. This constitutes a high level of performance. During the period, AT&T provided consumers

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[20] See United States v. AT&T 552 F. Supp. (D.D.C. 1982) at 172. AT&T's control of local bottleneck facilities was the reason the FCC itself originally cited for classifying AT&T as a dominant carrier in its Competitive Carrier proceeding.

[21] See, e.g., FCC Chairman Reed E. Hundt's remarks to the 106th Annual Regulatory Luncheon, National Association of Regulatory Utility Commissioners, November 15, 1994.

with benefits of $364 million to $464 million – in addition to passing through all reductions in access charges and not making any increases due to inflation. Moreover, AT&T flowed through hundreds of millions of dollars of international settlements reductions that it negotiated with foreign carriers. Furthermore, AT&T's customers also benefitted from significant improvements in service quality during the same period. Our methodology for calculating these price reductions was as follows.

To analyze price changes, one must first define a price index. Unfortunately, price indices are always imperfect. As is well-known and commonly acknowledged, they do not generally reflect quality changes. And as is also widely recognized, they can supply misleading results if the pattern of consumption changes substantially during the period being analyzed.

The latter problem is especially important in interexchange telecommunications. That is because there has been a substantial proliferation of discount service plans and an enormous shift in recent years from higher-priced offerings to lower-priced service plans. That process was described as "customer migration" in a 1992 study by R. Schmalensee and J. H. Rohlfs.[22] That study documented that customer migration is a major factor, accounting for a substantial portion of consumer benefits in long-distance telecommunications.

Standard price indices (e.g., Laspeyres and Paasche indices) do not reflect customer migration. Hence, studies using such indices substantially underestimate the benefits that consumers enjoy from competitive rivalry under a competitive industry struc-

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[22] Richard Schmalensee and Jeffrey H. Rohlfs, Productivity Gains Resulting from Interstate Price Caps for AT&T, September 3, 1992.

ture. Furthermore, such indices give no indication of the extent of the implicit bias arising on this account. One can be certain only that the methods substantially underestimate consumer benefits.

In recent years, a number of studies have purported to show that price reductions in interexchange telecommunications have been inadequate.[23] These studies are based on standard price indices, and do not account adequately for customer migration. Taking full account of customer migration is absolutely essential for accurate assessment of price changes in interexchange telecommunications. Otherwise the studies contain a large bias that renders them unenlightening.[24]

Since standard price indices exhibit serious deficiencies, a better approach is to measure quantities in physical units and prices as average revenues per physical unit. The Schmalensee-Rohlfs analysis used access minutes as the measure of quantity. Defining quantities that way gives less weight (0.5) to unidirectional services (e.g., WATS and 800), since those services use switched access at only one end. In the present analysis, we use conversation minutes as the measure of quantity. That method

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[23] See, e.g., William E. Taylor and Lester D. Taylor, "Postdivestiture Long-Distance Competition in the United States," The American Economic Review: Papers and Proceedings, Vol. 83, No. 2 (May 1993), pp. 185-190 (TT) and William E. Taylor and J. Douglas Zona, "An Analysis of the State of Competition in Long-Distance Telephone Markets, May 1995 (TZ).

[24] TT and TZ both attempt to address this problem by using the customer-migration rate estimated in Schmalensee-Rohlfs. However, that rate was estimated on the period 1988-1991 and does not necessarily apply to other time periods. In addition, the Schmalensee-Rohlfs study gives a weight of 0.5 to unidirectional services and, therefore, includes only half the customer migration associated with those services.

gives full weight to unidirectional services. It, therefore, better reflects AT&T's total interstate operations.

Needless to say, the use of average revenue per minute (ARPM) is not a panacea. We must carefully consider how that measure may distort our estimate of consumer benefits. In particular, we must consider whether a minute of use corresponds to more consumer value at one time than another. We examine a number of factors:

- **International Services**: International calls cost more than domestic calls and may grow more or less rapidly. This can cause an ARPM price index to rise or fall over time, even though customers are no better or worse off. Consumers have simply chosen to make more or fewer calls that cost more to supply. We deal with this problem by developing separate ARPM indices for domestic and international services.

- **Operator Services**: Operator services cost more than direct-dialed calls and (according to AT&T price-cap data) are growing more rapidly. This causes the ARPM indices to rise over time, even though customers are no worse off. We did not have data to estimate separate indices for operator-handled services and direct-dial services. As a result, our ARPM indices tend to underestimate customer benefits.

- **Time-of-Day and Length-of-Haul Usage Shifts**: Shifts of usage from one time of day to another could, in principle, bias an ARPM price index. However, AT&T data indicate no discernable time-of-day shifts in recent years. There are also no discernable recent trends with respect to length of haul. The ARPM price indices are, therefore, not significantly biased on either of these accounts.

- **Holding Time**: We must address similar concerns with respect to holding time. Indeed, TZ claim that holding times have increased since divestiture. They further assert that as a result, ARPM has declined with no associated increase in consumer benefits. With regard to

the 1991-1994 data that we analyze, their criticism is unfounded on two accounts: (a) Average holding times have decreased[25]; and (b) For the past several years, there has been no distinction between AT&T's price for the initial period and subsequent periods. Hence, shifts in holding time do not affect ARPM and cannot lead to bias.

- **Shifts Between Unidirectional and Duodirectional Services**: We can reasonably assume that shifts between unidirectional and duodirectional services do not reflect significant differences in consumer benefits. They are simply different ways to price calls.

We believe that the above list includes all the major factors that cause the value of a minute of usage to change over time. We conclude that, as a result of these factors, ARPM price indices tend, if anything, to underestimate consumer benefits.[26]

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[25] See FCC, In the matter of Pacific Bell, Petition for Rulemaking to Amend Section 69.106 of the Commission's Rules, AT&T Comments, filed August 22, 1994.

[26] TZ criticize the use of ARPM as a price index, but their arguments are not compelling. TZ offer an example in which prices of both MTS and WATS rise. However, because of customer migration to WATS, ARPM declines. They cite this example to criticize ARPM. In reality, this example confirms our main point. After the change, customers really are better off. They consume essentially the same service for less money. Price indices, which yield a contrary answer, do not accurately reflect customer benefits. Furthermore, in this example, the higher value of the price index does not reflect any increase in AT&T's profitability. Indeed, AT&T would need to improve its productivity to maintain the same level of profitability – notwithstanding the increase in standard price indices.

TZ's other examples (with the exception of their misguided discussion of holding time, discussed above) are all of this type. They demonstrate that ARPM does not accurately mirror changes in prices. However, that is not the point. The point is whether ARPM accurately reflects changes in consumer benefits. The discussion in our text indicates that ARPM does reasonably reflect consumer benefits, and, if anything, may tend to understate those benefits. It provides a conservative estimate of consumer benefits.

Our calculation of consumer benefits is shown in Table 1. It is based on aggregate company data, provided by AT&T, together with access data, provided by the FCC. The table shows annual changes in ARPM for access, domestic switched services, and international switched services. Our procedure is to treat the three categories separately. We then use Laspeyres or Paasche indices to combine the categories. The use of such indices does not result in serious bias, because there is no customer migration (as defined in Schmalensee-Rohlfs) among categories of domestic and international services, and access. These service categories differ inherently; so there is no issue of consumers' obtaining essentially the same service for a lower price.

Table 1 shows that access price reductions during the period amounted to $958 million to slightly less than $1.1 billion, depending on whether the reductions are measured with a Laspeyres or Paasche index. At the same time, prices of domestic switched services declined by approximately $1.7 billion to $2.0 billion — about $755 million to $900 million more than the access-charge reduction.

The international switched revenue data in Table 1 are net of settlements. The large increases in international ARPM (net of settlements) primarily reflect reductions in settlements paid to foreign carriers. According to AT&T price-cap data, the price of international switched services was only 1 percent higher in 1994 than in 1991.

Table 1 shows that in addition to not raising prices at all due to inflation, AT&T flowed through <u>all</u> reductions in domestic access charges. In addition, AT&T flowed through the large reductions it negotiated in international-settlement costs.

Finally, AT&T provided another $364 to $464 million of benefits to consumers.[27] This surely constitutes a high level of performance.[28]

The long-distance business should thus be a natural candidate for deregulation and competitive market rule, but the transition to deregulation has not been an easy one. Competitors have benefitted in numerous ways from a variety of regulatory burdens placed asymmetrically upon AT&T. As a result, they are not keen to see the end of asymmetric regulation, and they are certainly not averse to painting a picture of an industry in need of prolonged asymmetric regulation. No matter how competitive the long-distance industry is or becomes, there will most assuredly always be a marginal competitor who will claim that but for this or that regulatory favor, firm failure is the likely consequence, and with that, the failure of competition as well. Even at this late date, non-marginal carriers like MCI and Sprint apparently still cannot

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[27] TZ claim, on the basis of their calculations, that ARPM did not decline as much as access charges from 1984 to 1994. AT&T has submitted data to refute that claim. See rebuttal testimony of G. Blaine Darrah III, General Investigation into Intra Lata Competition, West Virginia Public Service Commission, Case No. 94-1103-T-GI, May 24, 1995. The AT&T data indicate that prices net of access declined sharply in the years 1984 to 1991, before the beginning of our study period. The data also indicate further declines from 1991 to 1994.

[28] ARPM indices, like standard price indices, do not reflect changes in quality. Thus, it is necessary to consider how quality changed during the 1991-1994 period to estimate consumer benefits. One of the biggest quality improvement during the period relates to the development and promotion of virtual private networks (VPN). During the period, VPN was actively marketed by AT&T and its rivals. As a result, many businesses enjoy telecommunications service features that were formerly unavailable. Another quality improvement was AT&T's introduction of "True Voice," which improves sound quality. We know of no credible claims that quality of interexchange telecommunications declined during the 1991-1994 period. Thus, we can reasonably conclude that the price reductions described above underestimate the consumer benefit, taking quality changes into account.

resist the opportunity to play the regulation game in pursuit of competitive advantage.

If, as we perceive, the Commission desires to take appropriate steps to conform regulation with the realities of the marketplace, this proceeding offers the Commission an important opportunity to make that task easier. Undoubtedly, part of the support for continued regulation of the interexchange market arises because the burden of regulation is asymmetric and favors AT&T's competitors. That support can be expected to dissipate as advantages are removed and burdens are equalized. Symmetrically regulated carriers may not favor deregulation, but they can reasonably be expected to support significantly relaxed regulation. Thus, while this proceeding does not actually involve any deregulation – it is about symmetry and treating likes alike – we think those who favor more thoroughgoing deregulation, as we do, can easily conceive of this as a step in the right direction. Moreover, by taking this step now, the FCC can clearly demonstrate its capacity for change in a rapidly changing telecommunications environment.

Synopsis

Symmetric regulation of long-distance competitors is the next logical step in the transition to a long-distance market governed primarily by competitive market forces. As such, it represents an economically sound public policy, the implementation of which, in our opinion, is long overdue. The impacts of the Commission's current asymmetric regulatory regime are largely negative: costly regulatory burdens are arbitrarily imposed; competitive advantage is arbitrarily awarded; competitive initiative is thwarted;

governmental processes are abused; support for legitimate institutions of government is undermined; and the transition to competitive market governance is made more difficult.

Given the ample productive capacity effectively distributed among numerous industry participants and the readily perceived willingness of customers to switch carriers in response to a better deal, the analytical basis for assigning AT&T dominant-carrier status is absent, and has been for several years. Current price restructuring efforts primarily reflect the need to overcome the historical legacy of economically inefficient pricing under regulation which, inter alia, prevented full recovery of fixed costs for light users. Under effective competition, this type of uneconomic pricing is infeasible and has been gradually altered by AT&T, utilizing the pricing flexibility it is afforded under price caps. Far from evidencing a lack of competition – an interpretation totally at odds with experience in other segments of the market where no one claims competition is lacking and any such claim would be insupportable – restructuring of prices for long-distance services is a clear manifestation of competitive forces at work.

The reason AT&T is no longer a dominant firm is that it no longer possesses the power to restrict market output. It lost that power when barriers to entry into the long-distance business were lowered, when AT&T divested control of bottleneck facilities, and when equal access was implemented under the terms of the MFJ. Today AT&T's rivals possess ample capacity to offset any restriction of output by AT&T. Under these conditions, asymmetric regulatory burdens cannot be justified. To the extent they are allowed to persist, they harm competition, consumers and the FCC

itself. As a matter of sound economics, good government and timely regulatory reform, the Commission should end its asymmetric treatment of AT&T.

CERTIFICATE OF SERVICE

I, Ann Marie Abrahamson, hereby certify that a true copy of the foregoing AT&T Reply was this date served by first class mail, postage prepaid, upon each of the following persons:

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